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Patent
Atty. Docket No. GEMS8081.209

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Polzin, Jason A.
Serial No. : 10/752,656
Filing Date : January 7, 2004
Title : Gradient Non-Linearity Compensation in Moving
Table MRI
Group Art Unit : 2859
Examiner : Louis M. Arana

CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

I hereby certify that, on the date shown below, this correspondence is being:

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**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §1.97/99**

Dear Sir:

In compliance with Applicant's duty of disclosure as set forth in 37 C.F.R. §1.56, listed on the attached equivalent to Form PTO-1449 are those patents, publications, and other information known to Applicant which may be considered material to the patentability of the

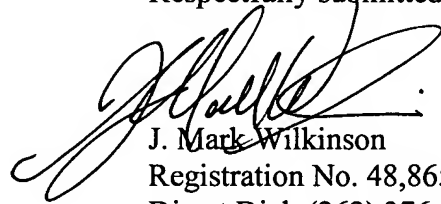
Polzin, Jason A.

S/N: 10/752,656

claims of the above-captioned application. **One copy of each non-U.S. patent reference is attached.**

Applicant respectfully requests that the documents listed on the attached equivalent to Form PTO-1449 be considered by the Examiner, that the references be made of record in the present application, and that an initialed copy of the duplicate equivalent to Form PTO-1449 be returned to the undersigned in accordance with MPEP 609.

Respectfully submitted,



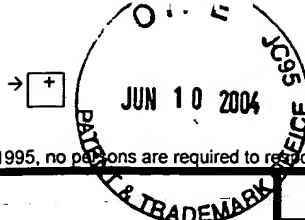
J. Mark Wilkinson
Registration No. 48,865
Direct Dial: (262) 376-5016
jmw@zpspatents.com

Date: June 7, 2004
Atty. Docket No.: GEMS8081.209

P.O. ADDRESS:

Ziolkowski Patent Solutions Group, LLC
14135 North Cedarburg Road
Mequon, WI 53097-1416
(262) 376-5170

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 4

Complete if Known

Application Number	10/752,656
Filing Date	January 7, 2004
First Named Inventor	Polzin, Jason A.
Group Art Unit	2859
Examiner Name	Louis M. Arana
Attorney Docket Number	GEMS8081.209

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	A	4,591,789		Glover et al.	05-27-1986	
	B	5,200,700		Glover et al.	04-06-1993	
	C	5,910,728		Sodickson	06-08-1999	
	D	5,928,148		Wang et al.	07-27-1999	
	E	6,249,694	B1	Foo et al.	06-19-2001	
	F	6,317,620	B1	Ho et al.	11-13-2001	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	U	JP	H6-304153	A	GE Yokogawa Medical	11-01-1994		✓
	V	JP	H6-311977	A	GE Yokogawa Medical	11-08-1994		✓
	W	JP	H8-173396	A	GE Yokogawa Medical	07-09-1996		✓
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¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

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Application Number	10/752,656
Filing Date	January 7, 2004
First Named Inventor	Polzin, Jason A.
Group Art Unit	2859
Examiner Name	Louis M. Arana
Attorney Docket Number	GEMS8081.209

Sheet 2 of 4

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	1	DJ BRYANT et al., "Measurement of Flow with NMR Imaging Using a Gradient Pulse and Phase Difference Technique," <i>J Comput Assist Tomogr</i> 1984; 8:588-93	
	2	O. DIETRICH et al., "Extending the Coverage of True Volume Scans by Continuous Movement of the Subject," <i>ISMRM Seventh Scientific Meeting</i> 1999; pg. 1653	
	3	RL EHMAN et al., "Adaptive Technique for High-Definition MR Imaging of Moving Structures," <i>Radiology</i> 1989; 173:255-263	
	4	TKF FOO et al., "Automated Detection of Bolus Arrival and Initiation of Data Acquisition in Fast, Three-Dimensional, Gadolinium-Enhanced MR Angiography," <i>Radiology</i> 1997; 203:275-280	
	5	J. HENNIG, "Overlapping Section Coverage in Multisection Imaging," <i>JMRI</i> 1993; 3:425-432	
	6	KY HO et al., "Gadolinium Optimized Tracking Technique: A New MRA Technique for Imaging the Peripheral Vascular Tree from Aorta to the Foot Using One Bolus of Gadolinium," <i>ISMRM Fifth Scientific Meeting</i> 1997; pg. 203	
	7	KY HO et al., "Peripheral Vasculature Tree Stenoses: Evaluation With Moving-Bed Infusion-Tracking MR Angiography," <i>Radiology</i> 1998; 260:683-92	
	8	DG KRUGER, "Continuously Moving Table Data Acquisition Method for Long FOV Contrast-Enhanced MRA and Whole-Body MRI," <i>Magnetic Resonance in Medicine</i> 2002; 47:224-231	
	9	K. LIU et al., "Applications of Shifted-Interleaved Multi-Volume Acquisition (SIMVA) with Suppressed Slab Boundary Artifcat," <i>ISMRM Seventh Scientific Meeting</i> 1999; pg. 1618	
	10	K. LIU et al., "Artifact Transformation Technique: Shifted Interleaved Multi-Volume Acquisition (SIMVA) for 3D FSE," <i>ISMRM Sixth Scientific Meeting</i> 1998; pg. 572	
	11	K. LIU et al., "Sliding Interleaved k _y (SLINKY) Acquisition: A Novel 3D MRA Technique With Suppressed Slab Boundary Artifact," <i>JMRI</i> 1998; 8:905-911	

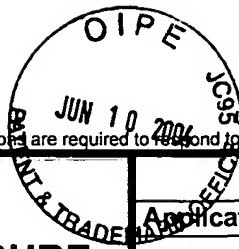
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			Examiner Name	Louis M. Arana	
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Sheet	3	of	4		

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Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
	12	K. LIU, "SLINKY: More Understanding, Optimization and Application for High Resolution MRA," <i>ISMRM Seventh Scientific Meeting</i> 1999; pg. 1908		
	13	K LIU et al., "Systematic Assessment and Evaluation of Sliding Interleaved k _y (SLINKY) Acquisition for 3D MRA," <i>JMRI</i> 1998; 8:912-923		
	14	JF MEANEY, Leeds General Infirmary, Leeds, UK, "Moving Bed MRA, The Future of Peripheral Arteriography?" <i>Philips</i>		
	15	JF MEANEY et al., "Stepping-Table Gadolinium-Enhanced Digital Subtraction MR Angiography of the Aorta and Lower Extremity Arteries; Preliminary Experience," <i>Radiology</i> 1999; 211:59-67		
	16	PR MORAN, "A Flow Velocity Zeugmatographic Interface for NMR Imaging in Humans," <i>Magnetic Resonance Imaging</i> 1982; 1:197-203		
	17	GL NAYLER et al., "Blood Flow Imaging by Cine Magnetic Resonance," <i>J Comput Assist Tomogr</i> 1986; 10:715-22		
	18	JG PIPE, "Analysis of Localized Quadratic Encoding and Reconstruction," <i>MRM</i> 1996; 36:137-146		
	19	JG PIPE, "Spatial Encoding and Reconstruction in MRI with Quadratic Phase Profiles," <i>MRM</i> 1995; 33:24-33		
	20	MR PRINCE et al., "Contrast Enhanced Abdominal MR Angiography; Optimization of Imaging Delay Time by Automating the Detection of Contrast Material Arrival in the Aorta," <i>Radiology</i> 1997; 203:109-114		
	21	SJ RIEDERER et al., "3D-Enhanced MR Angiography Using Fluoroscopic Triggering and an Elliptical Centric View Order," <i>Int. J. Card Imaging</i> 1999; 15:117-29		
	22	JS SWAN et al., "MR Angiography of the Pelvis with Variable Velocity Encoding and a Phase-Array Coil," <i>Radiology</i> 1994; 190:363-9		

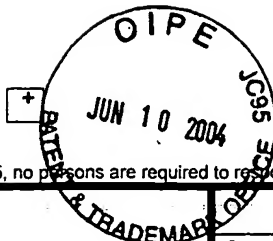
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	23	JS SWAN et al., "Peripheral MR Angiography with Variable Velocity Encoding (work in progress)," <i>Radiology</i> 1992; 813-7	
	24	P. VAN DIJK, "Direct Cardiac NMR Imaging of Heart Wall and Blood Flow Velocity," <i>J. Comput Assist Tomogr</i> 1984; 8:429-36	
	25	AH WILMAN et al., "Arterial Phase Carotid and Vertebral Artery Imaging in 3D Contrast-Enhanced MR Angiography by Combining Fluoroscopic Triggering with an Elliptical Centric Acquisition Order," <i>Magn. Reson Med.</i> 1998; 40: 24-35	
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